

Rouzbeh Amini

List of Publications by Year in descending order

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Version: 2024-02-01

64
papers

913
citations

516561

16
h-index

526166

27
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65
all docs

65
docs citations

65
times ranked

764
citing authors

#	ARTICLE	IF	CITATIONS
1	On the In Vivo Deformation of the Mitral Valve Anterior Leaflet: Effects of Annular Geometry and Referential Configuration. <i>Annals of Biomedical Engineering</i> , 2012, 40, 1455-1467.	1.3	89
2	An inverse modeling approach for stress estimation in mitral valve anterior leaflet valvuloplasty for in-vivo valvular biomaterial assessment. <i>Journal of Biomechanics</i> , 2014, 47, 2055-2063.	0.9	78
3	On the Biaxial Mechanical Response of Porcine Tricuspid Valve Leaflets. <i>Journal of Biomechanical Engineering</i> , 2016, 138, .	0.6	42
4	Pregnancy-Induced Remodeling of Collagen Architecture and Content in the Mitral Valve. <i>Annals of Biomedical Engineering</i> , 2014, 42, 2058-2071.	1.3	40
5	Fabrication of elastomeric scaffolds with curvilinear fibrous structures for heart valve leaflet engineering. <i>Journal of Biomedical Materials Research - Part A</i> , 2015, 103, 3101-3106.	2.1	36
6	Insights Into Regional Adaptations in the Growing Pulmonary Artery Using a Meso-Scale Structural Model: Effects of Ascending Aorta Impingement. <i>Journal of Biomechanical Engineering</i> , 2014, 136, 021009.	0.6	33
7	Anterior-posterior asymmetry in iris mechanics measured by indentation. <i>Experimental Eye Research</i> , 2011, 93, 475-481.	1.2	30
8	Anterior Chamber Angle Opening during Corneoscleral Indentation: The Mechanism of Whole Eye Globe Deformation and the Importance of the Limbus. , 2009, 50, 5288.		29
9	Surface Strains of Porcine Tricuspid Valve Septal Leaflets Measured in Ex Vivo Beating Hearts. <i>Journal of Biomechanical Engineering</i> , 2016, 138, .	0.6	28
10	Pressure-induced microstructural changes in porcine tricuspid valve leaflets. <i>Acta Biomaterialia</i> , 2018, 67, 248-258.	4.1	28
11	Fluorinated Methacrylamide Chitosan Hydrogel Dressings Improve Regenerated Wound Tissue Quality in Diabetic Wound Healing. <i>Advances in Wound Care</i> , 2019, 8, 374-385.	2.6	28
12	The Posterior Location of the Dilator Muscle Induces Anterior Iris Bowing during Dilation, Even in the Absence of Pupillary Block. , 2012, 53, 1188.		24
13	The impact of boundary conditions on surface curvature of polypropylene mesh in response to uniaxial loading. <i>Journal of Biomechanics</i> , 2015, 48, 1566-1574.	0.9	24
14	Regional Quantification of Brain Tissue Strain Using Displacement-Encoding With Stimulated Echoes Magnetic Resonance Imaging. <i>Journal of Biomechanical Engineering</i> , 2018, 140, .	0.6	24
15	Increased Iris Stiffness in Patients With a History of Angle-Closure Glaucoma: An Image-Based Inverse Modeling Analysis. , 2018, 59, 4134.		24
16	A computational multi-scale approach to investigate mechanically-induced changes in tricuspid valve anterior leaflet microstructure. <i>Acta Biomaterialia</i> , 2019, 94, 524-535.	4.1	23
17	A High-Fidelity and Micro-anatomically Accurate 3D Finite Element Model for Simulations of Functional Mitral Valve. <i>Lecture Notes in Computer Science</i> , 2013, 7945, 416-424.	1.0	23
18	Reverse Pupillary Block Slows Iris Contour Recovery From Corneoscleral Indentation. <i>Journal of Biomechanical Engineering</i> , 2010, 132, 071010.	0.6	20

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19	Cerebellar and Brainstem Displacement Measured with DENSE MRI in Chiari Malformation Following Posterior Fossa Decompression Surgery. <i>Radiology</i> , 2021, 301, 187-194.	3.6	20
20	Contribution of Different Anatomical and Physiologic Factors to Iris Contour and Anterior Chamber Angle Changes During Pupil Dilatation: Theoretical Analysis. , 2013, 54, 2977.		19
21	A Method for Predicting Collagen Fiber Realignment in Non-Planar Tissue Surfaces as Applied to Glenohumeral Capsule During Clinically Relevant Deformation. <i>Journal of Biomechanical Engineering</i> , 2014, 136, 031003.	0.6	19
22	Increased iris-lens contact following spontaneous blinking: Mathematical modeling. <i>Journal of Biomechanics</i> , 2012, 45, 2293-2296.	0.9	18
23	Quantification of Material Constants for a Phenomenological Constitutive Model of Porcine Tricuspid Valve Leaflets for Simulation Applications. <i>Journal of Biomechanical Engineering</i> , 2018, 140, .	0.6	16
24	The effects of 80°C short-term storage on the mechanical response of tricuspid valve leaflets. <i>Journal of Biomechanics</i> , 2020, 98, 109462.	0.9	16
25	Three-Dimensional CT Morphometric Image Analysis of the Clivus and Sphenoid Sinus in Chiari Malformation Type I. <i>Annals of Biomedical Engineering</i> , 2019, 47, 2284-2295.	1.3	15
26	Accuracy of cardiac-induced brain motion measurement using displacement encoding with stimulated echoes (DENSE) magnetic resonance imaging (MRI): A phantom study. <i>Magnetic Resonance in Medicine</i> , 2021, 85, 1237-1247.	1.9	15
27	COMPUTATIONAL SIMULATION OF ALTITUDE CHANGE-INDUCED INTRAOCULAR PRESSURE ALTERATION IN PATIENTS WITH INTRAVITREAL GAS BUBBLES. <i>Retina</i> , 2011, 31, 1656-1663.	1.0	14
28	Patients With Intravitreal Gas Bubbles at Risk of High Intraocular Pressure Without Exceeding Elevation of Surgery: Theoretical Analysis. , 2016, 57, 3340.		14
29	Dilation of tricuspid valve annulus immediately after rupture of chordae tendineae in ex-vivo porcine hearts. <i>PLoS ONE</i> , 2018, 13, e0206744.	1.1	13
30	Regional Brain Tissue Displacement and Strain is Elevated in Subjects with Chiari Malformation Type I Compared to Healthy Controls: A Study Using DENSE MRI. <i>Annals of Biomedical Engineering</i> , 2021, 49, 1462-1476.	1.3	13
31	Elasticity of the Porcine Lens Capsule as Measured by Osmotic Swelling. <i>Journal of Biomechanical Engineering</i> , 2010, 132, 091008.	0.6	12
32	Appropriate Objective Functions for Quantifying Iris Mechanical Properties Using Inverse Finite Element Modeling. <i>Journal of Biomechanical Engineering</i> , 2018, 140, .	0.6	10
33	Effects of enzyme-based removal of collagen and elastin constituents on the biaxial mechanical responses of porcine atrioventricular heart valve anterior leaflets. <i>Acta Biomaterialia</i> , 2021, 135, 425-440.	4.1	10
34	Mitral Valves: A Computational Framework. , 2015, , 223-255.		9
35	Anisotropic and nonlinear biaxial mechanical response of porcine small bowel mesentery. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2018, 78, 154-163.	1.5	9
36	Mechanical Response Changes in Porcine Tricuspid Valve Anterior Leaflet Under Osmotic-Induced Swelling. <i>Bioengineering</i> , 2019, 6, 70.	1.6	8

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37	Alterations in the Microstructure of the Anterior Mitral Valve Leaflet Under Physiological Stress. , 2012, , .		8
38	An imaged-based inverse finite element method to determine mechanical properties of the human trabecular meshwork. Journal for Modeling in Ophthalmology, 2017, 1, 100-111.	0.1	6
39	Quantification of iris concavity. Journal of Ophthalmic and Vision Research, 2010, 5, 211-2.	0.7	5
40	The role of elastin on the mechanical properties of the anterior leaflet in porcine tricuspid valves. PLoS ONE, 2022, 17, e0267131.	1.1	4
41	Engineered Airway Models to Study Liquid Plug Splitting at Bifurcations: Effects of Orientation and Airway Size. Journal of Biomechanical Engineering, 2018, 140, .	0.6	3
42	Theoretical Assessment of the Risk of Ocular Hypotony in Patients With Intravitreal Gas Bubbles Who Travel Through Subsea Tunnels. Translational Vision Science and Technology, 2019, 8, 4.	1.1	2
43	Iris stromal cell nuclei deform to more elongated shapes during pharmacologically-induced miosis and mydriasis. Experimental Eye Research, 2021, 202, 108373.	1.2	2
44	Biomechanical Assessment of the Iris in Relation to Angle-Closure Glaucoma: A Multi-scale Computational Approach. Lecture Notes in Computational Vision and Biomechanics, 2020, , 470-482.	0.5	2
45	Self-Efficacy Versus Gender: Project-Based Active Learning Techniques in Biomedical Engineering Introductory Computer Programming Courses. Journal of Biomechanical Engineering, 2020, 142, .	0.6	2
46	The Impact of Boundary Conditions on Surface Curvature Measurements of Polypropylene Mesh in Response to Uniaxial Loading. , 2013, , .		1
47	Mesoscale Structural Models in the Growing Pulmonary Artery. , 2016, , 383-402.		1
48	Using Hands-On Physical Computing Projects to Teach Computer Programming to Biomedical Engineering Students. Journal of Biomechanical Engineering, 2018, 140, .	0.6	1
49	The Effect of the Posterior Location of the Dilator on the Iris Concavity. , 2009, , .		1
50	Integration of Microstructural Architecture of the Mitral Valve Into an Anatomically Accurate Finite Element Mesh. , 2012, , .		1
51	Project-Based Active Learning Techniques Enhance Computer Programming Academic and Career Self-Efficacy of Undergraduate Biomedical Engineering Students. , 0, , .		1
52	Mechanical Properties of the Iris Dilator and Stroma Using Nanoindentation. , 2009, , .		0
53	Intraocular Pressure Alters Following Altitude Changes in Patients With Gas-Filled Eyes: Theoretical Analysis. , 2010, , .		0
54	Anterior Chamber Angle and Iris-Lens Contact Alteration During Pupillary Dilatation. , 2011, , .		0

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55	Patient-Specific Model of Iris Mechanics. , 2010, , .		0
56	Elasticity of the Lens Capsule as Measured by Osmotic Swelling. , 2010, , .		0
57	Does Spontaneous Blinking Increase Iris-Lens Contact?. , 2010, , .		0
58	Functional Dynamic In-Vivo Stresses of the Mitral Valve Anterior Leaflet. , 2011, , .		0
59	Physiological Micromechanics of the Anterior Mitral Valve Leaflet. , 2011, , .		0
60	A Method for Predicting Collagen Fiber Alignment in the Glenohumeral Capsule During Clinically Relevant Deformations. , 2012, , .		0
61	Contribution of Different Physiological and Anatomical Factors to the Anterior Chamber Angle During Pupil Dilation. , 2012, , .		0
62	Board 1: Work in Progress: Using Video Tutorials to Assist Biomedical Engineering Students in Learning Solid Modeling Skills. , 0, , .		0
63	Board 25: Work in Progress: Mandatory Attendance in Office Hours to Improve Studentsâ€™ Learning Experience. , 0, , .		0
64	Learning two programming languages in one semester does not adversely affect undergraduate biomedical engineering student performance. , 0, , .		0